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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/559,886 | 04/26/2000 | Wolfgang Huber | P00, 0558 | 1777 |
| 30596 | 7590 | 08/11/2004 | EXAMINER | |
| HARNESS, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195 | | | TUGBANG, ANTHONY D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3729 | |
| DATE MAILED: 08/11/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/559,886 | HUBER ET AL. | |
| | Examiner | Art Unit | |
| | A. Dexter Tugbang | 3729 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 May 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 10-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 10-32 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No: _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Response to Amendment

1. The applicant(s) amendment filed on 5/10/04 has been fully considered and made of record.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 10-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In Claim 10, the phrase of “exchangeable mounting members” (line 4) is new matter. The specification and drawings, as originally filed, do not provide support for the mounting members being “exchangeable”. The specification does not even define what is meant by the term of “exchangeable” as it relates to the mounting members.

The problems in Claim 10 above also occur in each of Claims 15 and 22, as the phrase of “exchangeable mounting members” is also recited.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claim 10-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 10, it is unclear from the disclosure what is meant by the phrase of “exchangeable mounting members” (line 4).

The problems in Claim 10 above also occur in each of Claims 15 and 22, as the phrase of “exchangeable mounting members” is also recited.

Claim Rejections - 35 USC § 102

7. Claims 10, 12-24 and 26-32, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Asai et al 5,692,292.

Asai discloses an automatic component mounting unit or system comprising the following structure: a plurality of exchangeable mounting members (working modules 12, 14, 16, 18) with each mounting member including a respective data storage device; and a control device 460, which meets all of the structural limitations of the claimed invention.

The mounting members (working modules) are “exchangeable” to the extent that as the substrate (circuit board) is moved to the different mounting members, only one mounting member is involved in the mounting process of mounting an electrical component at a time. Thus, all of the mounting members are “exchangeable” because they are all installed in the unit such that only one of the similar exchangeable mounting members is involved in the mounting

process. So each working module of Asai is exchanged with another to mount more than one component on the substrate.

With respect to the claimed “respective data storage device”, Asai shows at least one of the mounting members, for example the first working module 12, with either a read-only member ROM or a random-access memory RAM (see col. 18, lines 62+). Another mounting member, for example the second working module 14, additionally includes ROM and RAM (see col. 21, lines 22+). Either one of the ROM or RAM for each mounting member (working module) can be read as the “respective data storage device”.

Regarding Claim(s) 12-14 and 23, Asai further teaches a mounting head member, mounting feeding member, and a mounting sensor member. For example in the first mounting member (first working module 12), the mounting head, mounting feeding, and a mounting sensor members can be read as the component placing device 58, the conveyor device 56, and the imaging device 100, respectively.

Regarding Claim(s) 16-21 and 29-32, Asai further teaches that the control device 460 receives mounting process data related to positioning data configured to the movement of the mounting members and relative to a fixed reference mark (see col. 5, lines 54-63 and col. 23, lines 23+).

Regarding Claim(s) 24, if for example, the ROM of the mounting members is read as the “respective storage device”, then the RAM can be read as the “storage device”.

Regarding Claim(s) 26-28, Asai further teaches a data storage medium (col. 22, line 55). Alternatively, the first mounting member includes a computer 268, which would include a data storage medium (see col. 18, lines 62+).

Claim Rejections - 35 USC § 103

8. Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al'292 in view of Asai et al 5,588,195, referred to hereinafter as Asai'195.

Asai'292 teaches the claimed invention as previously discussed. However, Asai'292 does not appear to mention that the data storage device either includes, or is, a transponder.

Asai'195 teaches a transponder 316 to allow wireless, or contactless, communication in mounting components (see col. 26, lines 8+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the data storage devices of Asai'195 by including in each, or forming each, as a transponder, to positively allow wireless communication in mounting components.

Response to Arguments

9. Applicant's arguments filed 5/10/04 have been fully considered but they are not persuasive.

In regards to the merits of Asai et al, the applicant(s) arguments directed to the mounting members being "exchangeable" is fully met, inclusive, or explained in the rejection set forth above.

Further regarding Asai, the applicant(s) believe that Asai is deficient with respect to "wherein each...mounting members" (lines 6-8 of Claim 10 with similar limitations in each of Claims 15 and 22). It appears that the applicant(s) are arguing the function of what the "respective data storage device" does, and not the structure itself of the "respective data storage device". The examiner most respectfully disagrees for the reasons below.

First, the limitations of the “respective data storage device” do not distinguish structurally over the structure of either the read-only member ROM or random-access memory RAM of Asai et al. The applicant(s) have not even presented any arguments as to how the “respective data storage device” is in anyway, structurally different from Asai. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997).

Secondly, the read-only member ROM or random-access memory RAM of Asai et al do store data characteristics of the respective working modules that are directly related to a fixed reference mark. For example, the “fixed reference mark” can be read as the entire stationary footprint area of the unit (shown in Fig. 1) in which the working modules operate within this fixed footprint. The applicant(s) urge that the working schedule information of Asai is somehow not a stored “amount of mounting member data” and the examiner simply fails to see how this can be true. This working schedule information, particularly the fixing of the components and the mounting positions of the components on the substrate or circuit board, is considered to be critical data characteristics that each of the ROM or RAM store in order to enable each of the working modules to accurately mount components within this fixed footprint. If the working modules of Asai did not store these data characteristics, then none of the components of Asai would ever get mounted by the working modules. Asai’s Figures 12-15 diagrammatically show how important the ROM and RAM are to mounting of the components on the substrate for each of the working modules as the ROMs and RAMs store the important data characteristics, which in turn is fed to a control device 460.

Third and alternatively, even if the applicant(s) still disagree with the examiner's remarks above, it is noted that the ROMs and RAMs of Asai are actually memory devices. Therefore, each of the ROMs and RAMs are certainly more than capable of storing "an amount of mounting member data related to a fixed reference mark, characteristic for each of said respective mounting members".

In summary, the examiner maintains the rejections of Asai above.

Conclusion

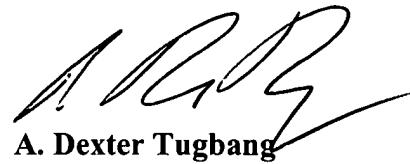
10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

August 5, 2004